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DAO, THUY CHAN				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/692,432

Applicant(s)

MCCOLLUM ET AL.

Examiner

Thuy Dao

Art Unit

2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16-22, 24-31 and 33-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-22, 24-31 and 33-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/03/09.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to the amendment filed on April 6, 2009.
2. Claims 1-14, 16-22, 24-31, and 33-37 have been examined.

Response to Amendments

3. In the instant amendment, claims 1, 22, 31, 33, and 34 have been amended.

Response to Arguments

4. Applicants' arguments have been fully considered.

a) Applicants asserted,

"However, while Larsen describes ...The cited art is silent on rules altogether. Moreover, none of the cited art mentions allowing a user to specify rules that identify various criteria that are to be met for the system to be considered healthy. Larsen merely verifies that certain functionality is provided or not provided by a shared library - Larsen's system does not provide criteria in user-specified rules for evaluating the health of a system." (Remarks, page 11, first paragraph, emphasis added).

After further consideration, examiner notes that Larsen also teaches the newly added limitations *"...allowing a system user to specify rules in the management information that identify one or more criteria that are to be met for the system to be considered healthy"* (e.g.,

"This invention contemplates active software probes in the form of small functions built into an application package that can be invoked by another application. When invoked, the probes return a positive response if the service being requested is available from the probed software package. If the service is not available, the probe will fail alerting the installer that something is not

right..." (col. 1: 50-56, condition/criteria as service availability, if service available → healthy and if service not available → not healthy, emphasis added);

"...The calling application also sends out queries for probes B and C and awaits positive responses from capabilities B and C in the shared library. In the event a required probe is not available, a probe failure indication tells the calling application that it does not have the correct shared library. This allows the application to fail on initialization for a known, repairable, reason..." (col. 4: 64 – col.5: 4, requirement/criteria for a specific shared library, if having the correct shared library → healthy, emphasis added); and

"...Following the return of a "PASS" indication to the calling application, the program then sets the state variable to PROBE_COMPLETE and exits the active probe function subroutine at step 38. If at step 30 it is determined that not all of the subtending probes have returned a "PASS," indicating that some of the subtending probes have failed, the program returns a "FAIL" at step 32 to the calling application and exits the probe function subroutine at step 38" (col. 6: 31-39, condition/criteria to return either a "PASS" (healthy) or a "FAIL" (not healthy), emphasis added).

b) Claim 31 (Remarks, pp. 11-12):

Amended claim 31 (lines 4-9) recites the same new limitations as those of claim 1, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claim 31.

Amended claim 31 (lines 17-19) recites other new limitations. After further consideration, examiner notes that Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action.

c) Claims 22, 33, and 34 (Remarks, page 12):

Claims 22, 33, and 34 recite the same new limitations as those of claim 1, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 22, 33, and 34.

Claim Rejections – 35 USC §103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 4-14, 16-21, 31 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen (art of record, US Patent No. 6,539,539) in view of Mason (art of record, US Patent Publication No. 2003/0093717 A1).

Claim 1:

Larsen discloses *a machine-implemented system, embodied in a computer-readable medium, that facilitates management of an application or service, comprising:*

an application or service for installation on the system (e.g., col.1: 50 - col.2: 15, installing a new software package); and

an attribution component that facilitates attributing selected parts of code of the application or service (e.g., FIG. 3, calling application, inserting (facilitates

attributing) Probe A to Capability A (selected parts of code) in Shared Library, Probe B to Capability B ...)

with management information (e.g., col.4: 45 – col.5: 4, Probes A-C, Capabilities A-C and services necessary to run as management information; col.1: 42-59);

the attribution component allowing a system user to specify rules in the management information that identify one or more criteria that are to be met for the system to be considered healthy (e.g., col.1: 50-56; col.4: 64 – col.5: 4; col.6: 31-39)

where the system uses the management information to manage the installed application or service (e.g., col.1: 42-59, using Probes A, B, C to detect whether the new software package has all Capabilities/services necessary to run correctly; col.2: 1-15).

Larsen does not explicitly disclose *the management information is identified within the attributed application or service using a uniform resource identifier*.

However, in an analogous art, Mason further discloses *the management information is identified within the attributed application or service using a uniform resource identifier* (e.g., [0020], identifying software resource by using URI).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Mason's teaching into Larsen's teaching. One would have been motivated to do so to locate and identify distributed resources as suggested by Mason (e.g., [0014] and [0051]).

Claim 2:

Larsen discloses *the system of claim 1, a software tool is applied to the attributed code of the application or service to expose the management information* (e.g., FIG. 3, inserting Probes to detect compatibility; FIG. 6, software tool to check "State" and return "Pass/Fail").

Claim 4:

Larsen discloses *the system of claim 1, the attributed code of the application or service indicates at least one subset of types within one or more components of the application or service that should be exposed and how the subset of types should be identified* (e.g., FIG. 6, block 22 identifying services, block 28, identifying subset of services/probes, block 30 loop to check all subtending services/probes (subset of types), col.5: 60 – col.6: 62).

Claim 5:

Larsen discloses *the system of claim 1, the management information is exposed from at least one of an in-process provider and a decoupled provider* (e.g., FIG. 5, software to insert Probes, col.5: 30-59).

Claim 6:

Larsen discloses *the system of claim 1, the management information is exposed from a decoupled provider, which attributed code of the decoupled provider includes at least one of a register call at startup and an unregister call at shutdown* (e.g., FIG. 5, initialization (startup), FIG. 6, “State = Proble_Complete” → exit (shutdown), col.5: 60 – col.6: 62).

Claim 7:

Larsen discloses *the system of claim 1, a catalog is created of all available instrumentation data of the system, wherein the catalog is browsed and used to discover a particular instrumentation point* (e.g., col.7, Table II-A, enum as a catalog which has particular probes “Probe_First_Time”, “Probe_In_Progress”, “Probe_Complet” ...).

Claim 8:

Larsen discloses *the system of claim 1, at runtime, management information is retrieved by identifying the associated management information within a catalog of all management information of the system and following the associated management*

information to the corresponding application or service (e.g., col.7-8, Table II-A-B, following the execution flow, checking "enum" (catalog) and processing probes and services (management information)).

Claim 9:

Larsen discloses the system of claim 8, for an in-process provider at runtime, the component associated with the management information, is loaded and invoked (e.g., FIG. 4, initialization and activating probes).

Claim 10:

Larsen discloses the system of claim 8,
for a decoupled provider at runtime, the management information is used with information provided by a register call to locate a corresponding running process, to connect to the running process (e.g., col.5: 30 – col.6: 50), and
to locate a subcomponent within the running process that is associated with the management information (e.g., col.5: 60 – col.7: 12).

Claim 11:

Larsen discloses the system of claim 1, the management information includes a probe attribute that is used to indicate that a member of a type is a probe (e.g., col.3: 52 – col.4: 29; col.4: 45—col.5: 29).

Claim 12:

Larsen discloses the system of claim 11, the type is decorated with a folder attribute (e.g., col.4: 4-44; col.7: 36 – col.8: 67).

Claim 13:

Larsen discloses the system of claim 1, the management information includes health information that is exposed from an in-process provider (e.g., col.8: 1 – col.9: 49).

Claim 14:

Larsen discloses *the system of claim 1, the management information includes health information that indicates health of the application or service* (e.g.,)col.3: 52 – col.4: 29; col.4: 45 – col.5: 29).

Claim 16:

Larsen discloses *the system of claim 1, the management information includes execution information that indicates when the management information should be executed* (e.g., col.3: 52 – col.4: 29; col.5: 30-59).

Claim 17:

Larsen discloses *the system of claim 1, the management information is exposed from a data source that includes at least one of hardware, software application, and an operating system* (e.g., col.4: 45 – col.5: 29).

Claim 18:

Larsen discloses *the system of claim 1, the management information includes class definitions that are exposed to a management component* (e.g., col.3: 52 – col.4: 29; col.5: 60 – col.6: 50).

Claim 19:

Larsen discloses *the system of claim 1, the class definitions are described in a managed object format* (e.g., col.5: 30-59; col.6: 19 – col.7: 12).

Claim 20:

Claim 20 is a system version, which recite(s) the same limitations as those of claim 1, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claim 1.

Claim 21:

Claim 21 is a computer-readable storage version, which recite(s) the same limitations as those of claim 1, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claim 1.

Claim 37:

Larsen discloses *the system of claim 1, wherein the attributed parts of code are considered probes for use in determining health of the application* (e.g., col.3: 52 – col.4: 29; col.4: 45 – col.5: 29).

7. Claims 22, 24-30 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen in view of Forbes (art of record, US Patent Publication No. 2002/0144218 A1).

Claim 22:

Larsen discloses *a method of managing an application or service, comprising:*
receiving the application or service for installation on a system (e.g., col.1: 50 - col.2: 15, installing a new software package);
attributing selected parts of code of the application or service with management information (e.g., FIG. 3, calling application, inserting (facilitates attributing) Probe A to Capability A (selected parts of code) in Shared Library, Probe B to Capability B ...)
the attribution component allowing a system user to specify rules in the management information that identify one or more criteria that are to be met for the system to be considered healthy (e.g., col.1: 50-56; col.4: 64 – col.5: 4; col.6: 31-39)
exposing the management information to a management system (e.g., col.4: 45 – col.5: 4, Probes A-C, Capabilities A-C and services necessary to run as management information; col.1: 42-59); *and*

controlling the application or service based upon the management information that is exposed when the application or service is installed on the system (e.g., col.1: 42-59, using Probes A, B, C to detect whether the new software package has all Capabilities/services necessary to run correctly; col.2: 1-15).

Larsen does not explicitly disclose *generating a manifest of the exposed management information*.

However, in an analogous art, Forbes further discloses *generating a manifest of the exposed management information* (e.g., [0013], [0019], [0059]).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Forbes' teaching into 's teaching. One would have been motivated to do so to manage the installation, execution, and uninstallation of software package as suggested by Forbes (e.g., [0013] and [0019]).

Claim 24:

Larsen discloses *the method of claim 22, the management information is exposed from one or more internal processes of a provider* (e.g., col.4: 4-44; col.5: 60 – col.6: 50).

Claim 25:

Larsen discloses *the method of claim 22, further comprising generating a catalog of all manifests of all available instrumentation data of the system, wherein the catalog is browsed and used to discover a particular instrumentation point* (e.g., col.6: 17 - col.7: 12).

Claim 26:

Larsen discloses *the method of claim 22, the service is a native service whose code is wrapped with a managed code to facilitate attribution thereof* (e.g., col.7: 36 – col.9: 49).

Claim 27:

Larsen discloses *the method of claim 22, the attributed code includes at least one of folder and probe attributes* (e.g., col.3: 52 – col.4: 29; col.4: 4: 45 – col.5: 29).

Claim 28:

Larsen discloses *the method of claim 22, further comprising authoring the application or service with management information in preparation for a runtime* (e.g., col.4: 4-44).

Claim 29:

Larsen discloses *the method of claim 22, further comprising generating an instrumentation manifest for the application or service based upon the management information* (e.g., col.5: 30-59).

Claim 30:

Larsen discloses *the method of claim 29, the instrumentation manifest is stored with a collection of instrumentation manifests that are accessible to a consumer of the management information* (e.g., col.8: 1 – col.9: 49).

Claim 33:

Larsen discloses *a computer-readable storage medium having computer-executable instructions for performing a method for managing an application or service, the method comprising:*

receiving the application or service for installation on a system (e.g., col.1: 50 - col.2: 15, installing a new software package);

attributing selected parts of code of the application or service with management information (e.g., FIG. 3, calling application, inserting (facilitates attributing) Probe A to Capability A (selected parts of code) in Shared Library, Probe B to Capability B ...);

the attribution component allowing a system user to specify rules in the management information that identify one or more criteria that are to be met for the system to be considered healthy (e.g., col.1: 50-56; col.4: 64 – col.5: 4; col.6: 31-39)

exposing the management information to a management system (e.g., col.4: 45 – col.5: 4, Probes A-C, Capabilities A-C and services necessary to run as management information; col.1: 42-59); and

controlling the application or service based upon the management information that is exposed when the application or service is installed on the system (e.g., col.1: 42-59, using Probes A, B, C to detect whether the new software package has all Capabilities/services necessary to run correctly; col.2: 1-15).

Larsen does not explicitly disclose *generating a manifest of the exposed management information*.

However, in an analogous art, Forbes further discloses *generating a manifest of the exposed management information* (e.g., [0013], [0019], [0059]).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Forbes' teaching into 's teaching. One would have been motivated to do so to manage the installation, execution, and uninstallation of software package as suggested by Forbes (e.g., [0013] and [0019]).

8. Claims 3 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen in view of Mason and Forbes.

Claim 3:

Larsen does not explicitly disclose *generating a manifest of the exposed management information*.

However, in an analogous art, Forbes further discloses *generating a manifest of the exposed management information* (e.g., [0013], [0019], [0059]).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Forbes' teaching into 's teaching. One would have

been motivated to do so to manage the installation, execution, and uninstallation of software package as suggested by Forbes (e.g., [0013] and [0019]).

Claim 34:

Claim 34 is a computer-readable storage version, which recite(s) the same limitations as those of claims 1 and 3, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claim 34.

Claim 35:

Larsen discloses *the computer-readable medium of claim 34, the management information includes a probe attribute that is used to indicate that a member of a type is a probe, which type is decorated with a folder attribute* (e.g., col.4: 45 – col.5: 29; col.6: 19 – col.7: 12).

Claim 36:

Larsen discloses *the computer-readable medium of claim 34,*
at runtime, a component of an in-process provider associated with the management information is loaded and invoked (e.g., col.3: 52 – col.4: 29), *and*
the management information for a decoupled provider is used with information provided by a register call to locate a corresponding running process, to connect to the running process (e.g., col.5: 30-59), *and*
to locate a subcomponent within the running process that is associated with the management information (e.g., col.6: 19 – col.7: 12).

9. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen in view of Mason and US Patent Publication No. 2002/0100017 A1 to Grier et al. (art made of record, hereafter "Grier").

Claim 31:

Larsen discloses *a distributed system, embodied in a computer-readable storage medium, for managing an application or service, comprising:*

means for attributing selected parts of code of the application or service with tag/instrumentation information for the distributed system (e.g., FIG. 5; col.5: 30-59; col.4: 4-44);

the health information including an indication of the health of a local computer system as well as any relationships between the local computer system and one or more remote computer systems (e.g., col.1: 12-25 and col.3: 5-20),

the attributing means allowing the system user to specify rules that identify one or more criteria in the management information that are to be met for the system to be considered healthy (e.g., col.1: 50-56; col.4: 64 – col.5: 4; col.6: 31-39) and

further allowing the system user to specify when the rules are to be executed by the system (e.g., col.5: 30-60, continue executing in a recursive loop, col.6: 62 - col.7: 12, continue executing to check/verify dependencies);

means for identifying the health information (e.g., col.4: 45 – col.5: 29, identifying missing/incompatible capability/services for software package (application in bad health condition); col.7: 36 – col.9: 49);

means for exposing the tag/instrumentation information in the form of instrumentation definitions (e.g., FIG. 3, col.4: 45 – col.5: 29);

means for cataloging the instrumentation definitions in a collection of instrumentation definitions (e.g., col.7: 36 – col.9: 49); and

means for controlling the application or service based upon the exposed instrumentation definitions when the application or service is installed on the system (e.g., FIG. 6, col.5: 60 – col.6: 50).

Larsen does not explicitly disclose *a uniform resource identifier*.

However, in an analogous art, Mason further discloses *a uniform resource identifier* (e.g., [0020], identifying software resource by using URI).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Mason's teaching into Larsen's teaching. One

would have been motivated to do so to locate and identify distributed resources as suggested by Mason (e.g., [0014] and [0051]).

Neither Larsen nor Mason explicitly discloses other limitations. However, in an analogous art, Grier further discloses *generating a manifest of the exposed health information, wherein the manifest generating means further allows the system user to create a customized version of the manifest to override any manufacturer-provided manifests* (e.g., [0009], FIG. 6, block 600 loading application manifest → FIG. 7, replacing assembly → FIG. 6, ending initialize, i.e., a customized manifest version has overridden the original manifest version, "manufacture-provided" as claimed).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Grier's teaching into Larsen and Mason's teaching. One would have been motivated to do so to bind software assemblies to application programs dynamically at runtime as suggested by Grier (e.g., [0012] and [0085]).

Conclusion

10. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication should be directed to examiner Thuy (Twee) Dao, whose telephone/fax numbers are (571) 272 8570 and (571) 273 8570,

respectively. The examiner can normally be reached on every Tuesday, Thursday, and Friday from 6:00AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Twee Dao/
Examiner, Art Unit 2192

/Tuan Q. Dam/
Supervisory Patent Examiner, Art Unit 2192